ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Yakima Valley Dairies
SDWA-10-2013-0080

Residential Well Sampling

Data Usability Summary Report
Sample Delivery Group(s)
SWF0058 and SWF0070

July 15, 2013

ARCADIS

Amy Goldberg Day
Project Chemist

Steve Hicks, PE
Quality Manager

Kevin M. Freeman, PG
Project Coordinator

Data Usability Summary Report
Sample Delivery Group(s)
SWF0058 and SWF0070

Residential Well Sampling
Yakima Valley Dairies
SDWA-10-2013-0080

Prepared for:
Yakima Valley Dairies

Prepared by:
ARCADIS U.S., Inc.
695 North Legacy Ridge Drive
Suite 200
Liberty Lake
Washington 99019
Tel 509 928 3369
Fax 509 928 3075

Our Ref.:
SK030326.0001
SK030334.0001
SK030335.0001

Date:
July 15, 2013

ARCADIS

Table of Contents

Summary

This Data Usability Summary Report summarizes the review of Sample Delivery Group numbers SWF0058 and SWF0070 for samples collected under the Yakima Valley Dairies Residential Well Sampling Quality Assurance Project Plan (QAPP). This assessment of data validation and usability was performed per the guidance and requirements established under Section 4 of the QAPP.

Samples in Delivery Group numbers SWF0058 and SWF0070 were collected from residential wells per the QAPP during the period June 9 to June 10, 2013. This review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with nitrate were reviewed for this validation. Field documentation was not included in this review.

Analytical Data Package Documentation

The table below is the evaluation of the data package completeness.

Items Reviewed		Reported		Performance Acceptable	
		No	Yes	No	Yes
1.	Sample receipt condition		X		X
2.	Requested analyses and sample results		X		X
3.	Master tracking list		X		X
4.	Methods of analysis		X		X
5.	Reporting Limits		X		X
6.	Sample collection date		X		X
7.	Laboratory sample received date		X		X
8.	Sample preservation verification (as applicable)		X		X
9.	Sample preparation/extraction/analysis dates		X		X
10.	Fully executed chain of custody form		X		X
11.	Narrative summary of quality assurance (QA) or sample problems provided		X		X
12.	Data package completeness and compliance		X		X

Laboratory Analysis

Analyses were performed according to United States Environmental Protection Agency (USEPA) Method 300.0 (USEPA 2010). Data were reviewed in accordance with USEPA National Functional Guidelines (USEPA 2005). Summaries of the analytical results are presented in Tables 1 and 2. Laboratory Analytical Reports are presented in Appendices A and B.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines (USEPA 2005):

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

- UB The compound is considered non-detect at the listed value due to associated blank contamination.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- R The sample results are rejected as unusable. The compound may or may not be present in the sample.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Nitrate

Holding Times

The specified holding time for nitrate (as nitrogen) analyzed by USEPA Method 300.0 is presented in the following table.

Method	Matrix	Holding Time	Preservation
Nitrate as Nitrogen USEPA Method 300.0	Water	48 hours	Cool to 4±2 °C

The samples were prepared and analyzed within the specified holding time criteria.

Blank Contamination

QA blanks (i.e., laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Field blanks were collected as part of this dataset at one blank per 10 collected samples.

Sample Delivery Group	Number of Collected Samples	Field Blank Sample Number(s)
SWF0058	7	RW-3214
SWF0070	7	RW-3169

Nitrate associated with the QA blanks exhibited a concentration less than the MDL. No data were qualified based on blank contamination.

Matrix Spike/Matrix Spike Duplicate Samples

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the (optional) MS/MSD analysis must exhibit recoveries within the method-specified acceptance limits of 80 to 120 percent. The relative percent difference (RPD) between the MS and MSD results should be within the laboratory-established acceptance limits of zero to 12.1 percent.

The MS/MSD results were compliant and no data were qualified based on MS/MSD recovery.

Laboratory Control Sample/Ongoing Precision and Recovery Analysis

The LCS/OPR analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/OPR analysis must exhibit recoveries within the method-specified acceptance limits.

All compounds associated with the LCS/OPR analyses exhibited recoveries within the control limits. The LCS/OPR results were compliant and no data were qualified based on LCS/OPR recovery.

Field Duplicate Sample Analysis

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. Field duplicate samples were collected as part of this dataset at one duplicate per 10 collected samples.

Sample Delivery Group	Number of Collected Samples	Duplicate Pair Sample Numbers (Sample / Field Duplicate)
SWF0058	7	RW-1224 / RW-2224
SWF0070	7	RW-1212 / RW-2212

The duplicate results were compliant and no data were qualified based on the relative percent difference between the two samples.

System Performance and Overall Assessment

Overall system performance was acceptable. The reporting limits met the data quality objects. The overall data quality is within the guidelines specified in the method. No data were qualified based on the findings of the data validation.

Data Validation Checklist for Nitrate

Nitrate (as Nitrogen): USEPA Method 300.0	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GC/MS					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Field blanks		X			
Laboratory Control Sample (LCS) Accuracy %R		X		X	
LCS Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
MS %R		X		X	
MSD %R		X		X	
MS/MSD RPD		X		X	
Field/Laboratory Duplicate Sample RPD		X		X	
Dilution Factor		X		X	
Moisture Content					X

Note: %R Percent recovery

ARCADIS

Tables

Table 1
Summary of Analytical Results
Sample Delivery Group SWF0058

Data Useability Summary Report
Yakima Valley Dairies
Residential Well Sampling

Sample No.	Sampled	Type	Analytical Method	Analyte	Result	Units	Qualifier
RW-1224	6/9/2013 16:00	Well Sample	EPA 300.0	Nitrate-Nitrogen	9.26	mg/l	
RW-2224	6/9/2013 16:03	Duplicate of RW-1224	EPA 300.0	Nitrate-Nitrogen	9.28	mg/l	
RW-3214	6/9/2013 18:05	Field Blank	EPA 300.0	Nitrate-Nitrogen	0.2	mg/l	U
RW-1214	6/9/2013 18:12	Well Sample	EPA 300.0	Nitrate-Nitrogen	12.7	mg/l	
RW-1237	6/9/2013 19:00	Well Sample	EPA 300.0	Nitrate-Nitrogen	35.7	mg/l	
RW-1221	6/9/2013 19:28	Well Sample	EPA 300.0	Nitrate-Nitrogen	13	mg/l	
RW-1235	6/9/2013 18:32	Well Sample	EPA 300.0	Nitrate-Nitrogen	6.16	mg/l	
RW-1238	6/9/2013 19:44	Well Sample	EPA 300.0	Nitrate-Nitrogen	13.8	mg/l	
RW-1230	6/10/2013 11:19	Well Sample	EPA 300.0	Nitrate-Nitrogen	25.9	mg/l	

Acronyms and Abbreviations:
mg/l = milligrams per liter
U = The compound was analyzed for but not detected. The result is the compound quantitation limit.

Table 2
Summary of Analytical Results
Sample Delivery Group SWF0070

Data Useability Summary Report
Yakima Valley Dairies
Residential Well Sampling

Sample No.	Sampled	Type	Analytical Method	Analyte	Result	Units	Qualifier
RW-1204	6/10/2013 18:40	Well Sample	EPA 300.0	Nitrate-Nitrogen	13.1	mg/l	
RW-1218	6/10/2013 17:55	Well Sample	EPA 300.0	Nitrate-Nitrogen	26.6	mg/l	
RW-1219	6/10/2013 18:10	Well Sample	EPA 300.0	Nitrate-Nitrogen	31.1	mg/l	
RW-1216	6/10/2013 17:02	Well Sample	EPA 300.0	Nitrate-Nitrogen	4.56	mg/l	
RW-1211	6/10/2013 16:40	Well Sample	EPA 300.0	Nitrate-Nitrogen	3.06	mg/l	
RW-1212	6/10/2013 16:00	Well Sample	EPA 300.0	Nitrate-Nitrogen	12.5	mg/l	
RW-2212	6/10/2013 16:05	Duplicate of RW-1212	EPA 300.0	Nitrate-Nitrogen	12.3	mg/l	
RW-1169	6/10/2013 15:08	Well Sample	EPA 300.0	Nitrate-Nitrogen	9.72	mg/l	
RW-3169	6/10/2013 14:55	Field Blank	EPA 300.0	Nitrate-Nitrogen	0.2	mg/l	U

Acronyms and Abbreviations:
mg/l = milligrams per liter
U = The compound was analyzed for but not detected. The result is the compound quantitation limit.

ARCADIS

Appendix A

TestAmerica Labs
Analytical Report SWF0058

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st. Avenue
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: SWF0058
Client Project/Site: [none]
Client Project Description: Yakima Dairies

For:
ARCADIS U.S., Inc. - Liberty Lake
695 N. Legacy Ridge Drive, Suite 200
Liberty Lake, WA 99019

Attn: Tom Mullen

Authorized for release by:
6/13/2013 1:10:56 PM

Randee Decker, Project Manager
Randee.Decker@testamericainc.com

Table of Contents

Sample Summary

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
SWF0058-01	RW-1224	Water	06/09/13 16:00	06/11/13 07:50
SWF0058-02	RW-2224	Water	06/09/13 16:03	06/11/13 07:50
SWF0058-03	RW-3214	Water	06/09/13 18:05	06/11/13 07:50
SWF0058-04	RW-1214	Water	06/09/13 18:12	06/11/13 07:50
SWF0058-05	RW-1237	Water	06/09/13 19:00	06/11/13 07:50
SWF0058-06	RW-1221	Water	06/09/13 19:28	06/11/13 07:50
SWF0058-07	RW-1235	Water	06/09/13 18:32	06/11/13 07:50
SWF0058-08	RW-1238	Water	06/09/13 19:44	06/11/13 07:50
SWF0058-09	RW-1230	Water	06/10/13 11:19	06/11/13 07:50

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ra io
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1224
Date Collected: 06/09/13 16:00
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-01
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	9.26		0.400		mg/l		06/11/13 08:40	06/11/13 08:52	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-2224
Date Collected: 06/09/13 16:03
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-02
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	9.28		0.400		mg/l		06/11/13 08:40	06/11/13 09:10	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-3214
Date Collected: 06/09/13 18:05
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-03
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	ND		0.200		mg/l		06/11/13 08:40	06/11/13 14:08	1 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1214
Date Collected: 06/09/13 18:12
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-04
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	12.7		0.400		mg/l		06/11/13 08:40	06/11/13 09:48	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1237
Date Collected: 06/09/13 19:00
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-05
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	35.7		0.400		mg/l		06/11/13 08:40	06/11/13 10:06	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1221
Date Collected: 06/09/13 19:28
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-06
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	13.0		0.400		mg/l		06/11/13 08:40	06/11/13 10:25	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1235
Date Collected: 06/09/13 18:32
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-07
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	6.16		0.400		mg/l		06/11/13 08:40	06/11/13 10:43	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1238
Date Collected: 06/09/13 19:44
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-08
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	13.8		0.400		mg/l		06/11/13 08:40	06/11/13 11:02	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1230
Date Collected: 06/10/13 11:19
Date Received: 06/11/13 07:50

Lab Sample ID: SWF0058-09
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	25.9		0.400		mg/l		06/11/13 08:40	06/11/13 11:21	2 00

Method: EPA 300.0 - Anions by EPA Method 300.0

Lab Sample ID: 13F0062-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0062 — **Prep Batch: 13F0062_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	ND		0.200		mg/l		06/11/13 08:00	06/11/13 12:54	1 00

Lab Sample ID: 13F0062-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0062 — **Prep Batch: 13F0062_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-Nitrogen			5.00	4.97		mg/l		99.4	90 - 110		

Lab Sample ID: 13F0062-MS1 — **Client Sample ID: RW-3214**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0062 — **Prep Batch: 13F0062_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-Nitrogen	ND		5.00	4.69		mg/l		93.7	80 - 120		

Lab Sample ID: 13F0062-MSD1 — **Client Sample ID: RW-3214**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0062 — **Prep Batch: 13F0062_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	trix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-Nitrogen	ND		5.00	4.71		mg/l		94.2	80 - 120	0.468	12.1

Lab Sample ID: 13F0062-DUP1 — **Client Sample ID: RW-3214**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0062 — **Prep Batch: 13F0062_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
Nitrate-Nitrogen	ND			ND		mg/l					13.1

Lab Chronicle

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1224
Lab Sample ID: SWF0058-01
Date Collected: 06/09/13 16:00
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 08:52	CBW	TAL SPK

Client Sample ID: RW-2224
Lab Sample ID: SWF0058-02
Date Collected: 06/09/13 16:03
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 09:10	CBW	TAL SPK

Client Sample ID: RW-3214
Lab Sample ID: SWF0058-03
Date Collected: 06/09/13 18:05
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		1.00	13F0062	06/11/13 14:08	CBW	TAL SPK

Client Sample ID: RW-1214
Lab Sample ID: SWF0058-04
Date Collected: 06/09/13 18:12
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 09:48	CBW	TAL SPK

Client Sample ID: RW-1237
Lab Sample ID: SWF0058-05
Date Collected: 06/09/13 19:00
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 10:06	CBW	TAL SPK

Client Sample ID: RW-1221
Lab Sample ID: SWF0058-06
Date Collected: 06/09/13 19:28
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 10:25	CBW	TAL SPK

Lab Chronicle

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Client Sample ID: RW-1235

Lab Sample ID: SWF0058-07

Date Collected: 06/09/13 18:32
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 10:43	CBW	TAL SPK

Client Sample ID: RW-1238

Lab Sample ID: SWF0058-08

Date Collected: 06/09/13 19:44
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 11:02	CBW	TAL SPK

Client Sample ID: RW-1230

Lab Sample ID: SWF0058-09

Date Collected: 06/10/13 11:19
Matrix: Water
Date Received: 06/11/13 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0062_P	06/11/13 08:40	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0062	06/11/13 11:21	CBW	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st. Avenue, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Laboratory: TestAmerica Spokane

All certifica ions held by this laboratory are listed. Not all cer ifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-13
Washington	State Program	10	C569	01-06-14

Method Summary

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0058

Method	Method Description	Protocol	Laboratory
EPA 300.0	Anions by EPA Method 300.0		TAL SPK

Protocol References:

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st. Avenue, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

5755 8th Street East, Tacoma, WA 98424-1317 253-922-2310 FAX 922-5047
11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: 3WF0508

CLIENT: AREADIS

REPORT TO: TOM MULLEN
ADDRESS: 695 N. Legacy Ridge Drive #200 Liberty Lake WA 99019
PHONE: FAX:

INVOICE TO: AREADIS-US

P.O. NUMBER:

PROJECT NAME: YVD
PROJECT NUMBER: TBD
SAMPLED BY: Sebesta + Lyon

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME		PRESERVATIVE: Nitric to pH<2	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	RW-1224	6-9-13	1600	X		W	1		
2	RW-2224		1603						
3	RW-3214		1805						
4	RW-1214		1812						
5	RW-1237		1900						
6	RW-1221		1928						
7	RW-1235		1832						
8	RW-1238		1944						
9	RW-1230	6-10-13	1119						
10									

RELEASED BY: Lisa M. Sebesta — DATE: 6-10-13
PRINT NAME: — FIRM: AREADIS — TIME: 1500 to FedEx
RECEIVED BY: Christie Mian — DATE: 6-11-13
PRINT NAME: — FIRM: TA-Spokane — TIME: 750
RELEASED BY: — DATE:
PRINT NAME: — FIRM: — TIME:
RECEIVED BY: — DATE:
PRINT NAME: — FIRM: — TIME:

ADDITIONAL REMARKS:

TEMP: 29 — PAGE 1 OF 1

TAL-1000 (0612)

TestAmerica Spokane
Sample Receipt Form

Work Order #SNF0058	Client: Arcadis	Project: YUD
Date/Time Received: 6-11-13 0750	By: CW	

Samples Delivered By: ☐Shipping Service ☒Courier ☐Client ☐Other:

List Air Bill Number(s) or Attach a photocopy of the Air Bill: 8020 4658 2331

Receipt Phase	Yes	No	NA	Comments
Were samples received in a cooler:	X			
Custody Seals are present and intact:	X			
Are CoC documents present:	X			
Necessary signatures:	X			

Thermal Preservation Type: ☐Blue Ice ☐Gel Ice ☒Real Ice ☐Dry Ice ☐None ☐Other:

Temperature: 2.9 °C Thermometer (Circle one Serial #122208346 Keyring IR Serial # 111874910 IR Gun 2)(acceptance criteria 0-6

Temperature out of range: ☐Not enough ice ☐Ice melted ☐w/in 4hrs of collection ☐NA ☐Other:

Log-in Phase Date/Time: 6/11/13 0826 By: CS	Yes	No	NA	Comments
Are sample labels affixed and completed for each container	X			
Samples containers were received intact:	X			
Do sample IDs match the CoC	X			
Appropriate sample containers were received for tests requested	X			
Are sample volumes adequate for tests requested	X			
Appropriate preservatives were used for the tests requested	X			
pH of inorganic samples checked and is within method specification	X			
Are VOC samples free of bubbles >6mm (1/4" diameter)			X	
Are dissolved parameters field filtered			X	
Do any samples need to be filtered or preserved by the lab		X		
Does this project require quick turnaround analysis		X		
Are there any short hold time tests (see chart below)	X			Nitrate
Are any samples within 2 days of or past expiration		X		
Was the CoC scanned	X			
Were there Non-conformance issues at login		X		
If yes, was a CAR generated #			X	

24 hours or less	48 hours	7 days
Coliform Bacteria	BOD, Color, MBAS	TDS, TSS, VDS, FDS
Chromium +6	Nitrate/Nitrite	Sulfide
	Orthophosphate	Aqueous Organic Prep

Form No. SP-FORM-SPL-002 12 December 2012

ARCADIS

Appendix B

TestAmerica Labs
Analytical Report SWF0070

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st. Avenue
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: SWF0070
Client Project/Site: [none]
Client Project Description: Yakima Dairies

For:
ARCADIS U.S., Inc. - Liberty Lake
695 N. Legacy Ridge Drive, Suite 200
Liberty Lake, WA 99019

Attn: Tom Mullen

Authorized for release by:
6/13/2013 1:13:58 PM

Randee Decker, Project Manager
Randee.Decker@testamericainc.com

Table of Contents

Sample Summary

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
SWF0070-01	RW-1204	Water	06/10/13 18:40	06/11/13 15:25
SWF0070-02	RW-1218	Water	06/10/13 17:55	06/11/13 15:25
SWF0070-03	RW-1219	Water	06/10/13 18:10	06/11/13 15:25
SWF0070-04	RW-1216	Water	06/10/13 17:02	06/11/13 15:25
SWF0070-05	RW-1211	Water	06/10/13 16:40	06/11/13 15:25
SWF0070-06	RW-1212	Water	06/10/13 16:00	06/11/13 15:25
SWF0070-07	RW-2212	Water	06/10/13 16:05	06/11/13 15:25
SWF0070-08	RW-1169	Water	06/10/13 15:08	06/11/13 15:25
SWF0070-09	RW-3169	Water	06/10/13 14:55	06/11/13 15:25

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ra io
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1204
Date Collected: 06/10/13 18:40
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-01
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	13.1		0.400		mg/l		06/11/13 16:28	06/11/13 16:38	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1218
Date Collected: 06/10/13 17:55
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-02
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	26.6		0.400		mg/l		06/11/13 16:28	06/11/13 16:57	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1219
Date Collected: 06/10/13 18:10
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-03
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	31.1		0.400		mg/l		06/11/13 16:28	06/11/13 17:16	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1216
Date Collected: 06/10/13 17:02
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-04
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	4.56		0.400		mg/l		06/11/13 16:28	06/11/13 17:34	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1211
Date Collected: 06/10/13 16:40
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-05
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	3.06		0.400		mg/l		06/11/13 16:28	06/11/13 17:53	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1212
Date Collected: 06/10/13 16:00
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-06
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	12.5		0.400		mg/l		06/11/13 16:28	06/11/13 18:12	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-2212
Date Collected: 06/10/13 16:05
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-07
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	12.3		0.400		mg/l		06/11/13 16:28	06/11/13 18:30	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1169
Date Collected: 06/10/13 15:08
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-08
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	9.72		0.400		mg/l		06/11/13 16:28	06/11/13 18:49	2 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-3169
Date Collected: 06/10/13 14:55
Date Received: 06/11/13 15:25

Lab Sample ID: SWF0070-09
Matrix: Water

Method: EPA 300.0 - Anions by EPA Method 300.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	ND		0.200		mg/l		06/11/13 16:28	06/11/13 19:07	1 00

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Method: EPA 300.0 - Anions by EPA Method 300.0

Lab Sample ID: 13F0067-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0067 — **Prep Batch: 13F0067_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-Nitrogen	ND		0.200		mg/l		06/11/13 16:28	06/11/13 20:40	1 00

Lab Sample ID: 13F0067-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0067 — **Prep Batch: 13F0067_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-Nitrogen			5.00	5.07		mg/l		101	90 - 110		

Lab Sample ID: 13F0067-MS1 — **Client Sample ID: RW-3169**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0067 — **Prep Batch: 13F0067_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-Nitrogen	ND		5.00	4.91		mg/l		98.1	80 - 120		

Lab Sample ID: 13F0067-MSD1 — **Client Sample ID: RW-3169**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0067 — **Prep Batch: 13F0067_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	trix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-Nitrogen	ND		5.00	4.90		mg/l		97.9	80 - 120	0.224	12.1

Lab Sample ID: 13F0067-DUP1 — **Client Sample ID: RW-3169**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 13F0067 — **Prep Batch: 13F0067_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
Nitrate-Nitrogen	ND			ND		mg/l					13.1

Lab Chronicle

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-1204 — Lab Sample ID: SWF0070-01

Date Collected: 06/10/13 18:40
Date Received: 06/11/13 15:25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 16:38	CBW	TAL SPK

Client Sample ID: RW-1218 — Lab Sample ID: SWF0070-02

Date Collected: 06/10/13 17:55
Date Received: 06/11/13 15:25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 16:57	CBW	TAL SPK

Client Sample ID: RW-1219 — Lab Sample ID: SWF0070-03

Date Collected: 06/10/13 18:10
Date Received: 06/11/13 15:25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 17:16	CBW	TAL SPK

Client Sample ID: RW-1216 — Lab Sample ID: SWF0070-04

Date Collected: 06/10/13 17:02
Date Received: 06/11/13 15:25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 17:34	CBW	TAL SPK

Client Sample ID: RW-1211 — Lab Sample ID: SWF0070-05

Date Collected: 06/10/13 16:40
Date Received: 06/11/13 15:25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 17:53	CBW	TAL SPK

Client Sample ID: RW-1212 — Lab Sample ID: SWF0070-06

Date Collected: 06/10/13 16:00
Date Received: 06/11/13 15:25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 18:12	CBW	TAL SPK

Lab Chronicle

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Client Sample ID: RW-2212

Lab Sample ID: SWF0070-07

Date Collected: 06/10/13 16:05
Matrix: Water
Date Received: 06/11/13 15:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 18:30	CBW	TAL SPK

Client Sample ID: RW-1169

Lab Sample ID: SWF0070-08

Date Collected: 06/10/13 15:08
Matrix: Water
Date Received: 06/11/13 15:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		2.00	13F0067	06/11/13 18:49	CBW	TAL SPK

Client Sample ID: RW-3169

Lab Sample ID: SWF0070-09

Date Collected: 06/10/13 14:55
Matrix: Water
Date Received: 06/11/13 15:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Wet Chem		1.00	13F0067_P	06/11/13 16:28	CBW	TAL SPK
Total	Analysis	EPA 300.0		1.00	13F0067	06/11/13 19:07	CBW	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st. Avenue, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Laboratory: TestAmerica Spokane

All certifica ions held by this laboratory are listed. Not all cer ifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-13
Washington	State Program	10	C569	01-06-14

Method Summary

Client: ARCADIS U.S., Inc. - Liberty Lake
Project/Site: [none]

TestAmerica Job ID: SWF0070

Method	Method Description	Protocol	Laboratory
EPA 300.0	Anions by EPA Method 300.0		TAL SPK

Protocol References:

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st. Avenue, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

5755 8th Street East, Tacoma, WA 98424-1317 253-922-2310 FAX 922-5047
11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: SWF0070

CLIENT: ARCADIS

REPORT TO: TOM MULLEN
ADDRESS: 1695 N. Legacy Ridge Drive, Suite 200
Liberty Lake WA 99019
PHONE: FAX:

INVOICE TO: ARCADIS - US

P.O. NUMBER:

PROJECT NAME: YVD
PROJECT NUMBER: TBD
SAMPLED BY: Sebesta + Lyons

PRESERVATIVE

REQUESTED ANALYSES: Volatiles

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	RW-1204	6-10-13 1840	W	1		
2	RW-1218	1755		1		
3	RW-1219	1810		1		
4	RW-1216	1702		1		
5	RW-1211	1640		1		
6	RW-1212	1600		1		
7	RW-2218	1605		1		
8	~~RW-1230~~	~~1119~~				
9	RW-1169	1508		1		
10	RW-3069	~~1505~~ 1510		1		

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 STD. | X | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

RELEASED BY: PRINT NAME: PAULA LYONS FIRM: ARCADIS DATE: 6-11-13 TIME: 15:29

RECEIVED BY: PRINT NAME: Chris Williams FIRM: TA Spokane DATE: 6-11-13 TIME: 15:25

RELEASED BY: PRINT NAME: FIRM: DATE: TIME:

RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 1.9 PAGE 1 OF 1

TAL-1000 (0612)

6/13/2013

TestAmerica Spokane
Sample Receipt Form

Work Order #: SWF0070	Client: Arcadis	Project: YVD
Date/Time Received: 6-11-13 15:25	By: Chris	

Samples Delivered By: ☐ Shipping Service ☐ Courier ☑ Client ☐ Other: _____

List Air Bill Number(s) or Attach a photocopy of the Air Bill:

Receipt Phase	Yes	No	NA	Comments
Were samples received in a cooler:	Y			
Custody Seals are present and intact:			δ	
Are CoC documents present:	Y			
Necessary signatures:	Y			

Thermal Preservation Type: ☐ Blue Ice ☐ Gel Ice ☑ Real Ice ☐ Dry Ice ☐ None ☐ Other: _____

Temperature: 1.9 °C Thermometer (Circle one Serial #122208348-Keyring IR Serial # 111874910 IR Gun 2)(acceptance criteria 0-6

Temperature out of range: ☐ Not enough ice ☐ Ice melted ☐ w/in 4hrs of collection ☐ NA ☐ Other: _____

Log-in Phase Date/Time: 6/11/13 1533 By: CB	Yes	No	NA	Comments
Are sample labels affixed and completed for each container	X			
Samples containers were received intact:	X			
Do sample IDs match the CoC	X			
Appropriate sample containers were received for tests requested	X			
Are sample volumes adequate for tests requested	X			
Appropriate preservatives were used for the tests requested	X			
pH of inorganic samples checked and is within method specification	X			
Are VOC samples free of bubbles >6mm (1/4" diameter)			X	
Are dissolved parameters field filtered			X	
Do any samples need to be filtered or preserved by the lab		X		
Does this project require quick turnaround analysis		X		
Are there any short hold time tests (see chart below)	X			Nitrate
Are any samples within 2 days of or past expiration		b		
Was the CoC scanned	b			
Were there Non-conformance issues at login		b		
If yes, was a CAR generated # _____			Y	

24 hours or less	48 hours	7 days
Coliform Bacteria	BOD, Color, MBAS	TDS, TSS, VDS, FDS
Chromium +6	Nitrate/Nitrite	Sulfide
	Orthophosphate	Aqueous Organic Prep

Form No. SP-FORM-SPL-002 12 December 2012